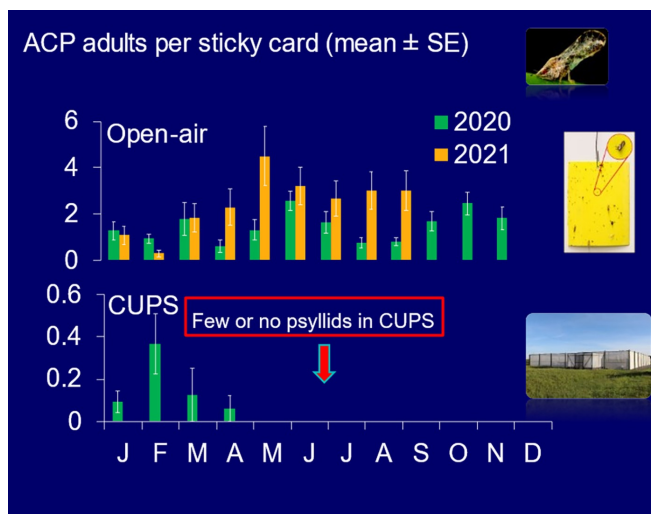


Citrus Under Protective Screen Provides Protection from Asian Citrus Psyllid and Other Pests

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Take Home Message:

- CUPS provided significant protection against ACP and HLB.
- Pests (mites, CLM, thrips, scales, mealybugs) and beneficial organisms (predators and parasitoids) were observed in the CUPS.
- Maintenance sprays of insecticides and miticides were effective for a short time.

Summary: The citrus under protective screen (CUPS) system is designed to grow citrus inside screened enclosures to protect it from huanglongbing (HLB) and its vector Asian citrus psyllid (ACP). It is becoming challenging to grow citrus in the traditional open-air

production system due to the high incidence and spread of HLB, mainly by ACP. We have been investigating CUPS and open-air orchard planted with 'Ray Ruby' grapefruit at a density of 1,957 trees per hectare. Each of the four CUPS and open-air controls were planted with 128 trees and 96 trees, respectively. In 2019-2020, 1.3 to 1.5 ACP adults were observed per yellow sticky card in the traditional open-air control. In CUPS, 0.05 adults were observed per card between two years. No ACP were observed in the CUPS with any of the three sampling methods (tap sampling, yellow sticky cards, suction sampling) in 2021, while 2.4 adults per card were detected just outside the CUPS walls in the

traditional open-air control. The rare incidences of ACP occurrence in the CUPS never translated into shoot infestation except when CUPS were damaged and experienced more psyllids. Pests such as mites, citrus leafminer (CLM), thrips, scales, mealybugs, and beneficial organisms (parasitoids of several pests and small predators that attack multiple pests) were able to selectively enter CUPS through the permeable screen or doors. Maintenance sprays of insecticides and miticides conducted in CUPS for suppressing pests such as mites and CLM were effective for a short time.

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